Chapter One: Introduction

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The state of Alaska is offering for lease lands on the North Slope in Oil and Gas Lease Sale 87, North Slope Areawide. This will be the state's first areawide oil and gas lease sale. The sale area consists of all unleased, state owned lands lying between the National Petroleum Reserve-Alaska (NPRA) on the west and the Arctic National Wildlife Refuge (ANWR) on the east, and from the Beaufort Sea in the north to the Umiat Meridian Baseline in the south. The sale area contains as much as 5,100,000 acres. This sale is scheduled for June 24, 1998.

Prior to holding a state oil and gas lease sale, the director, Division of Oil and Gas (DO&G), is required to determine whether the sale serves the best interests of the state. A best interest finding sets out the facts, statutes, regulations, and applicable policies upon which the determination is based. Two documents are issued by the DO&G; a Preliminary Best Interest Finding, and subsequently, a Final Best Interest Finding.

Alaska Statute 38.05.035 governs the disposal of state owned subsurface interests and includes public notice requirements referred to in this document (AS 38.05.035(e)(5) and AS 38.05.945). It also prescribes what, at minimum, must be in this final best interest finding document including a summary of comments on the proposed sale received by the division, which can be found in Appendix A. Chapters One through Nine represent the fulfillment of the statutory requirements contained in AS 38.05.035. A compilation of other laws and regulations applicable to oil and gas activities in Alaska can be found in Appendix B.

A. Areawide Sale Process

The purpose of areawide leasing is to provide an established time each year that the state will offer for lease all available acreage within three geographical regions: Cook Inlet, the North Slope, and the Beaufort sea. By conducting lease sales at a set time each year, the state will have a stable, predictable leasing program which will allow companies to plan and develop their exploration strategies and budgets years in advance. The result will be more efficient exploration and earlier development which will, in turn, benefit the state and its residents.

1. The Original Best Interest Finding

Prior to the 1996 legislative amendments, industry was asked to nominate areas to include in a lease sale, and the Department of Natural Resources (ADNR) sought public comment on the sale areas being proposed for addition to the program. Areawide leasing will include all available acreage within each geographic region, so there will no longer be the need for industry nominations. The process for collecting public comments and information for an original best interest finding will remain the same as it has been in the past (see description under section entitled "Public Participation" below). The statutory requirements for an original best interest finding have also remained unchanged. See description under "Statutory Background" below. The DO&G must still issue a preliminary best interest finding and allow the public at least 60 days to comment. Both the preliminary and final best interest findings must comply with AS 38.05.035(e) and (g). Previously, however, a best interest finding had a life of five years. As a result of amendments to AS 38.05.180 (d) and (w) by the legislature, once a finding has been written for an areawide sale, ADNR can then conduct a lease sale in that same area each year for up to ten years without having to repeat the entire finding process.

For each areawide sale, each geographic region has been divided into tracts that will remain fixed for future sales. The extent of the state's ownership interest in these lands will not be determined prior to the sale. Instead, following the sale ADNR will verify title only for acreage that is leased. Therefore, should a potential bidder require title or land status information for a particular tract prior to the sale, it will be the bidder's responsibility to obtain that information from ADNR's public records. It is possible that a tract included in the sale may contain land that the state cannot legally lease (existing lease, federal, Native or private land, etc.). Once title has been verified, the legal descriptions for each tract's leaseable acreage will be made available to the public for inspection prior to issuing the leases. Depending on the number of tracts leased and the complexity of the land holdings involved, it could be weeks to months following the sale before the leases are issued.

2. When an Original Best Interest Finding is not Required

During the 10 years following a best interest finding for a sale area, annual sales can be held without DO&G having to write a new finding (AS 38.05.035(e)(6)(F). However, it may be necessary for DO&G to write a supplement to the finding prior to a lease sale. Approximately nine months before a sale, ADNR issues a call for comments requesting substantial new information that has become available since the most recent finding for that sale area was written. This request, sent to agencies and individuals on the division's mailing list, is also noticed in statewide and local newspapers with prominent display ads. Agencies and the public are given approximately two months in which to provide any new information. Based on information received, ADNR determines whether or not it is necessary to revise the finding. Either a supplement to the finding, or a decision of no new information is issued 90 days prior to the sale. Any person that has commented during the prescribed time, will have the reconsideration and appeal rights as described in AS 38.05.035.

Mitigation measures placed on earlier leases will be carried forward to all future sales unless, as a result of new information, ADNR deems it necessary to change some of the measures, or add additional ones. A new coastal management consistency review will be done whenever new information or conditions suggest the proposed lease sale may no longer be consistent with ACMP standards.

B. Oil and Gas Lease Sale 87

Publication of this final best interest finding follows professional and technical review of social, economic, environmental, geological, and geophysical information about the Sale 87 area, as well as comments received. This document describes the sale area and presents the department's review of the area's resources and history. It discusses the reasonably foreseeable effects that may occur as a result of oil and gas exploration, development, production, and transportation within the sale area. It also presents mitigation measures, including lessee advisories, to be imposed as plans of operation permit terms designed to reduce or eliminate any and all reasonably foreseeable adverse effects.

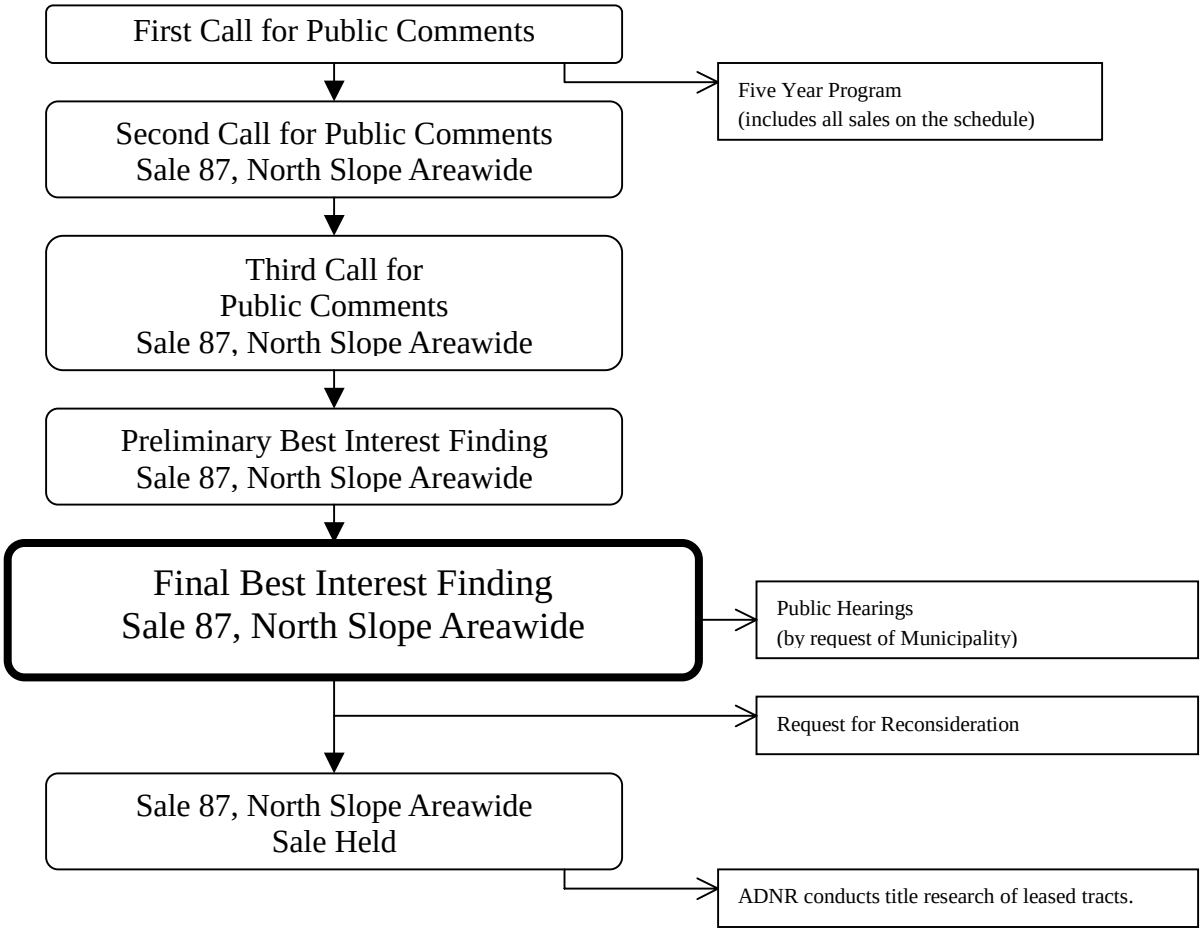
1. Sale 87 Scope and Status

The review of activities in the Sale 87 area is a multiphased development review. The director, in making this final finding, has limited the scope of the finding to the applicable statutes and regulations, facts, and issues that pertain solely to the lease sale phase of oil and gas activities, and the reasonably foreseeable significant effects of this sale. The three conditions under which phasing may occur, are met here. See AS 38.05.035(e)(1)(C).

Condition (a) is met because the only uses authorized by Sale 87 are part of the lease sale stage. The lease merely gives the lessee, subject to the provisions of the lease, the non-exclusive right to conduct geological and geophysical exploration for oil, gas, and associated substances within the leased area; and the exclusive right to drill for, extract, remove, clean, process, and dispose of any oil, gas, or associated substances that may underlie the lands described by the lease. While the lease gives the lessee the right to conduct these activities, the lease sale itself does not authorize any exploration or development activities by the lessee on leased tracts. Before any operation may be undertaken on the leased area, the lessee is required to comply with all applicable statutes and regulations, and secure approval of a plan of operations and all applicable permits.

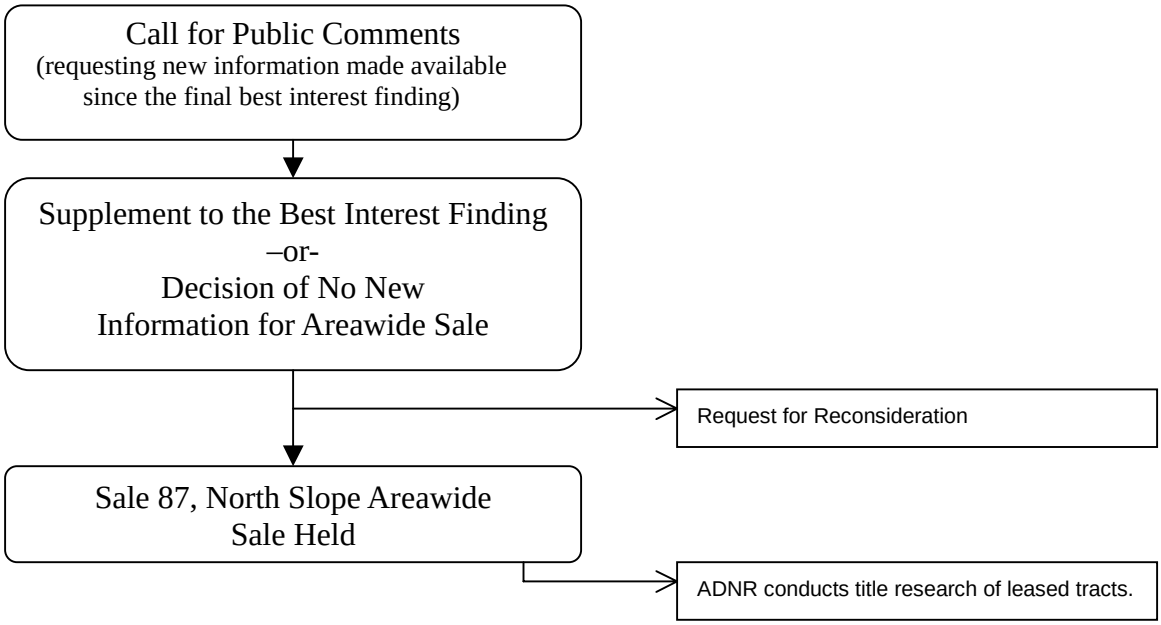
Condition (b) is met because state approval is required before the next phase (exploration) may proceed (see Chapter Five on the post-lease phases). Before exploration activities can occur on leased lands, the lessee must secure all applicable permits. Additional permits must also be prepared, and approved by the state, for any later development or production phase.

Lease Sale 87 Public Process



Lease Sale Public Process

(When an original finding is not required)



The plans of operation must identify the specific measures, design criteria, construction methods, and standards that will be employed to meet the provisions of the lease. Plans of operation are subject to extensive technical review by a number of local, state, and federal agencies. They are also subject to consistency with the Alaska Coastal Management Program (ACMP) standards, if the affected lands are within the coastal zone. The plans are available for public review upon submission to the state. Oil and gas exploration, development, or production-related activities will be permitted only if proposed future operations comply with all borough, state, and federal laws and the provisions of the lease.

Condition (c) is met because ADNR is conditioning this best interest determination and any leases ultimately issued with a number of mitigation measures designed to ensure that any future activities in the exploration, and development and production phases will serve the best interests of the state. These mitigation measures have been developed by ADNR through its review of the material facts and issues, including the reasonably foreseeable cumulative effects of oil and gas exploration, development, production, and transportation on the sale area.

Therefore, the scope of review in this finding is limited to the applicable statutes and regulations; the material facts and issues that are known to the director that pertain to the lease sale phase; and the reasonably foreseeable, significant effects of leasing. This includes all of the items referenced on the list in AS 38.05.035(g) and all material facts and issues raised by the public during the public comment period. These effects of specific future exploration, development and production will be considered at each phase, when permit applications for specific proposed activities at specific locations are reviewed by various government agencies and the public. This finding discusses the potential effects in general terms that may occur with oil and gas exploration, development, production, and transportation within the sale area, and the mitigation measures to be imposed as terms of the sale, as lease provisions, and as plans of operation permit terms to reduce or eliminate any possible adverse effects.

Figure 1.1 Map of the Sale Area

2. Public Process History

The state's oil and gas leasing process follows certain predictable steps and includes a specific timeline for reaching a decision on whether certain onshore and offshore areas should be leased for petroleum exploration and development.

Public Process History for Sale 87, North Slope Areawide

Date	Action	Comments
7/21/92	5-Year Call for Comments	87 titled, Kuparuk Uplands and included lands from the Colville River to R15E U.M. and from the Beaufort Sea coast to T1S U.M.
7/7/94	5-Year Call for Comments	Sale area reconfigured to include lands between NPRA and R15E U.M. and from the Beaufort Sea to the Brooks Range
1/23/95	Call for Comments (6 mo.)	Request for general information. Display ads in newspapers. Comment period closed 6/30/95.
1/16/96	Amendment to Five-Year Oil and Gas Leasing Program	Sale reconfigured. Now includes lands between NPRA and ANWR, the Beaufort Sea and the Umiat base line.
5/23/96	Call for Comments (6 months)	Request for specific information.

The original Sale 87 area, as proposed in 1992, included onshore lands west of the Colville River to R.15 E., U.M., and from the Beaufort Sea coast, south to R. 1S., U.M. Public comments were received pertaining to that sale configuration during the (7/21/92) comment period. In 1994, the entire sale area was reconfigured and the sale rescheduled. This new version of Sale 87 appeared in a call for comments on the Five-Year Oil and Gas Program dated July 7, 1994 and included the addition of about 1.25 million acres between NPRA and T.15 E., U.M., and from the Beaufort Sea to the Brooks Range. This comment period ended on September 7, 1994. A call for comments was issued on January 23, 1995, requesting general information. This comment period ended on June 30, 1995. On January 16, 1996 ADNR issued an announcement again reconfiguring the sale area. The new sale area consisted of lands bounded by NPRA on the west, ANWR on the east, the Beaufort Sea on the north and the Umiat Meridian base line on the south. This latest sale configuration consists of approximately 5,100,000 acres. A final call for comments was issued on May 23, 1996 and closed on November 23, 1996. This call requested specific socio-economic and environmental information. All written comments received by the division pertaining to any portion of the Sale 87 area from its earliest inception to the end of its final comment period are summarized and responded to in Appendix A.

All comments received are considered in the final determination whether Sale 87 is in the best interests of the state. DO&G has incorporated facts and issues into the corresponding discussion in this finding, however some issues raised by commentors may be addressed in the comments and responses section (Appendix A). Comments received contributed to the department's analysis of the sale's potential effects and selection of mitigation measures.[1]

C. Statutory Background

The Alaska Constitution provides that the state's policy is "to encourage . . . the development of its resources by making them available for maximum use consistent with the public interest" and that the "legislature shall provide for the utilization, development, and conservation of all natural resources belonging to the State, . . . for the maximum benefit of its people" (Alaska Constitution, art. VIII, ßß 1, 2). To comply with this provision, the legislature enacted Title 38 of the Alaska Statutes (AS 38) and directed the ADNR to implement the statutes.

[1] The public comment period, in addition to helping tailor the scope of the finding, is important since under AS 38.05.035(i), a person is eligible to file a request for reconsideration and subsequently an administrative appeal with the superior court only if the person meaningfully participated in the process and is affected by the final written finding. A person meaningfully participates by submitting written comment during the period for receipt of public comment or by presenting oral testimony at a public hearing.

Under AS 38.05.035(e), an ADNR director may not dispose of state land, resources, property, or interests, unless the director first determines in a written finding that such action will serve the best interests of the state. This written finding is known as a best interest finding and is a written analysis which describes for the public the facts and applicable law which are relevant to the disposal and gives a decision based on these factors. If the proposed activity occurs in a coastal area, AS 46.40 requires that the activity be consistent with the ACMP which includes approved local district coastal zone management plans.

AS 38.05.035(8) lists the topics that the DO&G must consider and discuss within the best interest finding analysis prior to determining whether an oil and gas lease sale is in the state's best interests:

i. property descriptions and locations;
ii. the petroleum potential of the proposed sale area, in general terms;
iii. fish and wildlife species and their habitats in the area;
iv. the current and projected uses in the area, including uses and value of fish and wildlife;
v. the governmental powers to regulate oil and gas exploration, development, production, and transportation;
vi. the reasonably foreseeable cumulative effects of oil and gas exploration, development, production, and transportation on the sale area, including effects on subsistence uses, fish and wildlife habitat and populations and their uses, and historic and cultural resources;
vii. lease stipulations and mitigation measures, including any measures to prevent and mitigate releases of oil and hazardous substances, to be included in the leases, and a discussion of the protections offered by these measures;
viii. the method or methods most likely to be used to transport oil or gas from the lease sale area, and the advantages and disadvantages, and relative risks of each;
ix. the reasonably foreseeable fiscal effects of the lease sale and the subsequent activity on the state and affected municipalities and communities, including the explicit and implicit subsidies associated with the lease sale, if any;
x. the reasonably foreseeable effects of oil and gas exploration, development, production, and transportation on the municipalities and communities within or adjacent to the lease sale area; and
xi. the bidding method or methods adopted by the commissioner under AS 38.05.180

The analysis must also discuss material issues that were raised during the period allowed for receipt of public comment.

1. Public Participation, Notices, and Hearings

The Alaska Constitution requires “prior public notice and other safeguards of the public interest as prescribed by law” prior to the leasing of state lands (Alaska Constitution, art. VIII, ß 10).

Although not required by law, DO&G issues several requests or “calls” for public comment to assist the agency in gathering information to include in the best interest findings and focusing on issues of specific concern. These calls for comments are sent to local governing bodies, state and federal agencies, the oil industry, environmental organizations and members of the public who have requested to receive information on proposed lease sales. Gathering issues and information for a best interest finding for an oil and gas lease sale begins with the state’s proposed Five-Year Oil and Gas Leasing Program. Every other year, ADNR is required under AS 38.05.180(b) to prepare a five-year oil and gas leasing program which is made available to the legislature. Public involvement begins when the division requests public comment on a list of proposed sale areas for the Five-Year Program. Notification is given by public mailing and display ads in the newspapers (see Figure 1.2).

A second request for general information and identification of issues and concerns is mailed to the public and agencies approximately three years before the final best interest finding is issued. Mailing lists are maintained by DO&G and consist of the names and addresses of those members of the public who have requested to be on the mailing list for a particular area, as well as various state, federal, and local agencies. The public is given about five months to comment.

A third, and usually final, request for comments is mailed to the public and agencies about 18 months before the final best interest finding is issued. Again, a notice of this request for identification of issues and

information is mailed to individuals and groups. A display ad is also published in newspapers. The public is given approximately five months to comment. These requests for public comment occur prior to distribution of the preliminary finding, which is also subject to public review and comment.

Title 38 of the Alaska statutes requires DO&G to issue a preliminary best interest finding at least 180 days prior to an oil and gas lease sale. The division allows the public at least 60 days to review and comment on the preliminary best interest finding analysis under AS 38.05.035(e)(5)(A). Comments on the preliminary best interest finding are researched and considered by DO&G staff, and appropriate changes are made for the subsequent final finding. The division issues a final best interest finding at least 90 days prior to the sale. See AS 38.05.035(e)(5)(B).

The public notice statute, AS 38.05.945, includes specific provisions for best interest findings for oil and gas lease sales. These include:

- Publication of a legal notice in newspapers of statewide circulation and in newspapers of general circulation in the vicinity of the proposed action at least once a week for two consecutive weeks;
- Publication of a notice in display advertising form in the newspapers described above at least once a week for two consecutive weeks;
- Public service announcements on the electronic media serving the area to be affected by the proposed action; and
- One or more of the following: posting in a conspicuous location in the vicinity of the action; notification of parties known or likely to be affected by the action; or another method calculated to reach affected parties.

AS 38.05.946 provides that a municipality, an Alaska Native Claims Settlement Act (ANCSA) corporation, or nonprofit community organization entitled to receive a 30-day notice of issuance of either a preliminary or final best interest finding, may hold a hearing which the commissioner shall attend. The commissioner has the discretion to hold a public hearing also. Although not required by statute or regulation, ADNR may:

(a) contact legislators serving areas affected by a lease sale and local governing bodies early in the lease sale process so that informational meetings with concerned citizens and organizations can be arranged; and
(b) conduct its own public hearings in one or more communities affected by a proposed lease sale at least once during the 60-day public comment period immediately following the issuance of the preliminary best interest finding.

Additional meetings and hearings are intended to provide information to the public about a proposed lease sale in the area and to encourage public comment. All findings under AS 38.05.035(e) must include a summary of agency and public comments regarding the proposed disposal and ADNR's responses to those comments. For each fact or issue raised in the public comment period that is determined not material to the decision, the director must present an explanation in the best interest finding under AS 38.05.035(e)(2). This provides assurance that the issue or fact was indeed considered in making the best interest finding and provides an explanation to the commentor as to why the determination of non-materiality was made.

After a final best interest finding is issued, an individual or organization may request reconsideration at the agency level in accordance with AS 38.05.035(i). A request for reconsideration of a best interest finding must be filed with the commissioner of ADNR within 20 days after the issuance of the final best interest finding. In order to file a request for reconsideration, a person must have "meaningfully participated" in the administrative review process and must be affected[2] by the final decision. The term "meaningfully participated" means that the person (1) submitted written comment during a public comment period; or (2) presented oral testimony at a public hearing. An issue must be raised during comment period, but not necessarily by the individual, in order to be the basis for a request for reconsideration.

A person may appeal to the superior court only if the person requested reconsideration at the agency level and may appeal only those points the person raised in the request for reconsideration (AS 38.05.035(l)).

[2] Alaska case law defines “a person affected by a decision” as someone who has a personal stake in the results of the decision. Sisters of Providence v. Dept. of Health & Social Services, 648 P. 2d 970, 974 (Alaska 1982).

By requiring that a party exhaust the administrative review and reconsideration process before appealing to the superior court, the agency is given the fullest opportunity to review, analyze, and respond to the appealed concerns prior to litigation. For the purposes of review, the person appealing must state and prove the defect alleged to exist within the best interest finding.

2. Best Interest Finding Scope

The best interest finding scope is based on the facts and issues known or made known to the director and may address only reasonably foreseeable, significant effects of the lease sale (AS 38.05.035(e)(1)(A)). Legislative history indicates that for an effect to be "reasonably foreseeable": (1) there is some cause/result connection between the proposed disposal and the effect to be evaluated; (2) there is a reasonable probability that the effect will occur as a result of the disposal; and (3) the effect will occur within a predictable time after the disposal. These practical constraints eliminate speculation about potential but improbable future effects and focus the best interest finding on those effects which are most likely to occur, since it is impossible to predict whether, let alone when and where, development or production, and related facilities might occur.[3] This concept is further clarified in AS 38.05.035(h) which states that “the director may not be required to speculate about future effects subject to future permitting that cannot reasonably be determined until the project or proposed use for which a written best interest finding is required is more specifically defined.”

A reasonably foreseeable effect must also be "significant." Significant means a known and noticeable impact on or within a reasonable proximity to the area involved in the disposal. Public input assists in providing a body of information for the best interest finding review and analysis that is as complete as possible. Information provided by agencies and the public assist the director in:

- reviewing all of the facts and issues;
- determining which are material to the decision of whether to lease the area in question;
- establishing the scope of the review for that decision by determining the reasonably foreseeable, significant effects of leasing that arise from those material facts and issues; and
- balancing those effects to determine under what conditions, if any, leasing the area will serve the best interests of the state.

3. Phased Review

Phased review recognizes that leasing of state land may result in future projects that cannot be predicted or planned with any certainty or specificity at the initial lease sale stage and that will require future detailed site-specific review prior to approval. In oil and gas leasing, it cannot be determined with any specificity or definition at the leasing stage if, when, where, how, or what kind of production might ultimately occur, as the result of leasing. Advances or the lack of advances in technology, along with market changes, while they cannot be predicted, may determine the answers to such questions. The lease sale phase only authorizes the transfer of mineral interests. At this phase there is no specific proposed development project and effects of the sale’s subsequent activities are not predictable, with the exception of rental payments required annually by the state to keep the lease. Thus, the analysis in the best interest finding is limited to a non site-specific discussion of the known or reasonably foreseeable effects of oil and gas activities on human and natural resources.

For example, Chapter Six of this finding discusses likely methods of oil and gas transportation, like pipelines, in an Arctic environment, with attention to the known physical and biological characteristics of the

[3] The probability that commercial production will ever occur on a tract offered in an oil and gas lease sale is very low. Statistics compiled by ADNR indicate that about half of the tracts (51.6 percent) offered in state oil and gas lease sales have been leased. Of these leased tracts, slightly more that 10 percent have actually been drilled on. About 5 percent of the tracts leased have been commercially developed for oil and gas production. This means that only a small percentage (approximately 3 percent) of state lands offered for lease have been commercially developed for oil and gas production (Kornbrath, 1995). It is important to note that the 3 percent production success to tracts offered ratio is a statewide average for sales held over a 33+ year time period. Considering changes in oil and gas recovery technology in recent decades, and that tracts continue to be offered and reoffered after they are relinquished, use of this average to estimate future effects of this sale, such as total surface impact, would be unreliable and misleading. For a discussion on surface impact as a result of oil and gas activities, see Chapter Five.

Sale 87 region. It does not and cannot discuss when, what kind, or where individual pipelines may be built. Such speculation concerning future development activities that will be subject to independent permitting requirements is not required by statute at the time a decision is made to lease.

Additional authorizations, such as plans of operation and permits, are required for exploration, development, and production phases. Phasing allows the analysis of proposed leasing to focus only on the issues pertaining to the lease sale stage and reasonably foreseeable significant effects of leasing and subsequent activities, such as exploration.

When a project is multiphased, review of issues which would require speculation about future factors may be deferred until permit authorization is sought at the exploration, development and production phases. A discussion of governmental and public involvement and responsibilities at these later phases is in the section on “Governmental Powers” below.

ADNR is allowed to review projects as "multi-phased development," when three conditions are met (AS 38.05.035(e)(1)(C)).

(a) the only uses to be authorized are part of the discrete phase being reviewed;
(b) ADNR's approval is required before the next phase may proceed (i.e., a plan of operations or permit must be authorized before another phase or segment may begin); and
(c) ADNR describes its reasons for allowing phased review and conditions the approval to ensure that any additional uses or activities proposed for that or any later phase will serve the best interests of the state.

Phased review is based in part on the fact that some multiphased projects are subject to continued review throughout the succeeding stages. Phased review is intended to allow for consideration of subsequent issues when sufficient data are available upon which to make reasonable decisions. Future phases cannot be reviewed with any accuracy when information regarding future activities is unknown, nonspecific, undefined, unavailable, or unreliable. As discussed above under Sale 87 Scope and Status,” Lease Sale 87 meets each of the three conditions listed in AS 38.05.035(e)(1)(C).

D. Governmental Powers to Regulate Oil and Gas Exploration, Development, Production, and Transportation

All subsequent oil and gas activities, exploration, development, production, and transportation are subject to numerous federal, state, and local laws, regulations, policies, and ordinances. Each successful bidder awarded a lease in a state oil and gas lease sale is obligated to comply with all federal, state, and local laws. A sample lease contract is contained in Appendix E. This section does not provide an exhaustive description of all federal, state, and local laws and regulations that may be applicable to such activities. However, it does provide a sufficient illustration of the broad powers of various government agencies to prohibit, regulate, and condition any activities related to oil and gas which may ultimately occur on Sale 87 leases. A list of important laws and regulations applicable to oil and gas activities is included in Appendix B. Each of the regulatory agencies, (state, federal, and local) has a different role in the oversight and regulation of post-lease sale activities.

Each lease issued as a result of Sale 87 will grant the lessee exclusive rights to subsurface mineral interests. However, as discussed in the previous section, a lease does not authorize subsequent exploration or development. The lessee’s rights are subject to the terms of the sale and the provisions of the lease (including the mitigation measures contained in Chapter Seven), all applicable state and federal laws and regulations, and may allow the lease holder to drill for, extract, remove, clean, process, and dispose of any oil, gas, or associated substances that may underlie the lands described by the lease.

Major permits and approvals that each agency requires are presented below, with additional information on the review process (see Table 1A and 1B). There is, however, no "typical" project. Actual processes, terms and conditions will vary with time-certain, site-specific operations. Each agency has field monitors assigned to ensure that operations are conducted as approved. The appropriate statutes and

regulations should be consulted when specifics are required as agency procedure will change from time to time.

1. Alaska Coastal Management Plan Review

Permit applications for post-lease sale activities must be as detailed as necessary for a comprehensive agency review. If a project affects or occurs within a coastal area, an ACMP review of the permit application will be conducted to determine whether the proposed activity is consistent with the standards of the ACMP. Following the review, each agency will approve or disapprove the permit and determine whether any additional protective stipulations or permit terms are required prior to approval.

The public is provided the opportunity to participate in ACMP reviews. For example, most permits needed for exploration well drilling require public notice. The ACMP permitting process goes through a 50-day agency review, and if approvals are needed by many agencies, the review may be coordinated by DGC. This process provides for coordinated agency reviews, public input, and insures consistency with the ACMP and local coastal district plans. The coastal district plan applicable to Sale 87 is the NSBCMP.

Application packages are distributed to affected coastal resource districts and permitting agencies by the lessee or designated operator, and DGC. Consistency review is initiated, and requests for additional information must be requested within 25 days. Public and agency review of comments are due on or before day 34, and a proposed consistency finding is issued on or before day 44. Requests for additional review must be received on or before day 49, and the Final Consistency Determination is issued (unless elevated) on day 50. If the determination is elevated, a director’s determination is issued by day 65. A citizen can petition for Coastal Policy Council review of the proposed consistency determination after the elevation of issues.

ACMP reviews are not required for all operations. Some activities can be authorized without an ACMP review, under a general concurrence from either the “A” or “B” lists.

"A" List activities are activities which do not result in significant impacts to coastal resources and they do not require a consistency determination review. Cleanup activities of an existing pad are an example of an A list activity.

"B" List General Concurrence activities are considered routine activities, that with standard conditions, are consistent with the ACMP. Individual ACMP consistency reviews are not necessary for activities that only require permits on the B List. However, a Coastal Project Questionnaire (CPQ) application is required for all projects on the B List.

The coordinating agency(s) will check the CPQ to ensure that the project meets the requirements of the B List General Concurrence. The coordinating agency will also go over the standard stipulations and any applicable procedures with the applicant to ensure that they will be met. Activities not on the A or B lists constitute the C list and are subject to the review process described at the beginning of this section.

TABLES 1A and 1B Permit Process

2. Alaska Department of Natural Resources (ADNR)

The Department of Natural Resources (ADNR), through the Divisions of Oil & Gas, Mining and Water Management, and Land, reviews, coordinates, conditions, and approves plans of operations or development and other permits as required before on-site activities take place. The department also monitors activities through field inspection once they have begun. Each plan of operations is site-specific and must be tailored to the activity requiring the permit. A plan of operations must identify the specific measures, design criteria, and construction methods and standards to be employed to comply with the terms of the lease. It must also comply with coastal zone consistency review standards and procedures established under 6 AAC 50 and 80. Applications for other state or federal agency authorizations or permits must be submitted with the plan of operations.

Lease Operations Plan of Approval: Land use activities on state oil and gas leases are regulated by 11 AAC 83.158 and paragraphs 9 and 10 of the lease contract. These require the lessee to prepare a plan of operations that must be approved by ADNR through DO&G and by any other interest holder, if ownership is shared, before the lessee may commence any activities on the lease. Except for equipment uses exempted under 11 AAC 96.020, the lessee must prepare a plan of operations and obtain all required approvals and permits for each phase of exploration, development, or production prior to implementation of that activity. All permit applications and plans are available for public review.

An application for approval of a plan of operations must contain sufficient information, based on data reasonably available at the time the plan is submitted in order for the commissioner to determine the surface use requirements and impacts directly associated with the proposed operations. An application must include statements and maps or drawings setting out the following:

(1) the sequence and schedule of the operations to be conducted on the leased area, including the date operations are proposed to begin and their proposed duration;
(2) projected use requirements directly associated with the proposed operations, including but not limited to the location and design of well sites, material sites, water supplies, solid waste sites, buildings, roads, utilities, airstrips, and all other facilities and equipment necessary to conduct the proposed operations;
(3) plans for rehabilitation of the affected lease area after completion of operations or phases of those operations; and
(4) a description of operating procedures designed to prevent or minimize adverse effects on other natural resources and other uses of the leased area and adjacent areas, including fish and wildlife habitats, historic and archeological sites, and public use areas.

Other stipulations, in addition to the mitigation measures already developed at the lease sale stage, may be required at the plan of operations approval stage. These will address site-specific concerns directly associated with the proposed project. The lease stipulations and the terms and conditions of the lease are attached to the plan of operations approval and are binding on the lessee. Lease activities are field monitored by ADNR, ADEC, ADF&G, and AOGCC to ensure compliance with each agency's respective permit terms. Paragraph 16 of the lease contract requires that the lessee keep the lease area open for inspection by authorized state officials. The lessee must post a $500,000 statewide bond to cover a drill site. Lease operations approvals are generally granted for three years.

Geophysical Exploration Permit: The geophysical exploration permit is a specific type of land use permit issued by the Division of Oil and Gas (11 AAC 96.010(a)(1)(E)). Seismic surveys are the most common activity authorized by this permit. The purpose of the permit is to minimize adverse effects on lands and resources while making important geological information available to the state. Under AS 38.05.035(a)(9)(c) the geological and geophysical data are held confidential at the request of the permittee.

Seismic surveys using vibroseis vehicles on the North Slope during winter have been found to be consistent with the ACMP provided certain conditions are adhered to. Seismic surveys in any other area of the state are subject to individual 30-day ACMP reviews. If the survey is part of an exploration program, the permit will be reviewed as part of the exploration well permit package.

The application must contain sufficient detail to allow evaluation of the activities' effects on the lands and resources. A map showing the general location and routes of travel, and a description of the activity and equipment that will be used must be included. Maps showing the precise location of the survey lines must also be provided, though this information is usually held confidential. A $100,000 bond is usually required.

The permit will contain measures to protect the land and resources of the area. The permit is usually issued for one year or less, but may be extended. If the permit is extended the director may modify existing terms or add new ones. The permit is revocable.

Pipeline Right-of-Way: Most transportation facilities within the lease area or beyond the boundaries of the lease area must be authorized by ADNR under the Right-of-Way Leasing Act, AS 38.35. This act gives the commissioner broad authority to oversee and regulate the transportation of oil and gas by pipelines, which are in whole or in part located on state land, to ensure that the state's interests are protected. The Right-of-Way Leasing Act permits are administered by the Joint Pipeline Office.

Temporary Water Use Permit: Under 11 AAC 93.210-220, Temporary Water Use permits are issued by the Division of Mining and Water Management and may be required for exploration activities. An application for a temporary water use permit must be made if the amount of water to be used is a significant amount as defined by 11 AAC 93.970(14), the use continues for less than five consecutive years, and the water applied for is not otherwise appropriated. The permit may be extended one time for good cause for a period of time not exceeding five years. The application must include: (1) the application fee; (2) a map indicating the location of the property, take point, and point of use; (3) the quantity of water to be used; (4) the nature of the water use; (5) the time period during which the water is to be used; and (6) the type and size of equipment to be used to withdraw the water. At the discretion of the commissioner, a temporary water use permit will be subject to conditions, including suspension and termination in order to protect the water rights of other persons or the public interest.

Permit and Certificate to Appropriate Water: Industrial or commercial use of water requires a Permit to Appropriate Water (11 AAC 93.120). The permit is issued for a period of time (not to exceed five years for industrial or commercial uses) consistent with the public interest and adequate to finish construction and establish full use of water. The commissioner will, in his discretion, issue a permit subject to conditions he considers necessary to protect the public interest. The conditions include, but are not limited to, conditions that reserve a sufficient quantity of water to achieve any of the following purposes: protection of fish and wildlife habitat, recreation, navigation, sanitation and water quality, protection of prior appropriations and for any other substantial public purpose.

A Certificate of Appropriation (11 AAC 93.130) will be issued if (1) the permit holder has shown that the means necessary for the taking of water have been developed; (2) the permit holder is beneficially using the amount of water to be certified; and (3) the permit holder has substantially complied with all permit conditions. Again, the commissioner will, in his or her discretion issue a certificate subject to conditions necessary to protect the public interest. For example, the applicant may be required to maintain a specific quantity of water at a given point on a stream or waterbody, or in a specified stretch of stream, throughout the year or for specified times of the year in order to protect fish and wildlife habitat, recreation, navigation or prior appropriations (11 AAC 93.130(c)(1)).

Land Use Permits: 11 AAC 96.010-140. Land Use Permits are issued by the Division of Land and may be required for exploration, development and production activities. Permits have a term of one year. All land use activities are subject to the following provisions:

(1) Activities employing wheeled or tracked vehicles shall be conducted in such a manner as to minimize surface damage;
(2) Existing roads and trails shall be used whenever possible. Trail widths shall be kept to the minimum necessary. Trail surface may be cleared of timber, stumps, and snags. Due care shall be used to avoid excessive scarring or removal of ground vegetative cover;
(3) All activities shall be conducted in a manner that will minimize disturbance of drainage systems, changing the character, polluting, or silting of streams, lakes, ponds, waterholes, seeps, and marshes, or disturbance of fish and wildlife resources. Cuts, fills, and other activities causing any of the above disturbances, if not repaired immediately, are subject to such corrective action as may be required by the director;

(4) The director may prohibit the disturbance of vegetation within 300 feet of any waters located in specially designated areas as prescribed in 11 AAC 96.010(2) except at designated stream crossings;
(5) The director may prohibit the use of explosives within one-fourth mile of designated fishery waters as prescribed in 11 AAC 96.010(2);
(6) Trails and campsites shall be kept clean. All garbage and foreign debris shall be eliminated by removal, burning, or burial, unless otherwise authorized;
(7) All survey monuments, witness corners, reference monuments, mining claim posts, and bearing trees shall be protected against destruction, obliteration, or damage. Any damaged or obliterated markers shall be reestablished in accordance with accepted survey practice of the division;
(8) Every reasonable effort shall be made to prevent, control, or suppress any fire in the operating area. Uncontrolled fires shall be immediately reported;
(9) Holes, pits, and excavations shall be filled, plugged, or repaired to the satisfaction of the director. Holes, pits, and excavations necessary to verify discovery on prospecting sites, mining claims, and mining leasehold locations may be left open but shall be maintained as required by the director;
(10) No person may engage in mineral exploratory activity on land, the surface of which has been granted or leased by the state of Alaska, or on land for which the state has received the reserved interest of the United States until good faith attempts have been made to agree with the surface owner or lessee on settlement for damages which may be caused by such activity. If agreement cannot be reached, or lease or surface owner cannot be found within a reasonable time, operations may be commenced on the land only with specific approval of the director, and after making adequate provision for full payment of any damages which the owner may suffer;
(11) Entry on all lands under mineral permit, lease, or claim, by other than the holder of the permit, lease, or claim or his authorized representative, shall be made in a manner which will prevent unnecessary or unreasonable interference with the rights of the permittee, lessee, or claimant. Additional stipulations may be imposed.

Material Sale Contract: A material sale contract must include, if applicable, but is not limited to (1) a description of the sale area, (2) the volume of material to be removed, (3) the method of payment, (4) the method of removal of the material, (5) the bonds and deposits required of the purchaser, (6) the purchaser's liability under the contract, (7) the improvements to and occupancy of the sale area required of the purchaser, (8) and the reservation of material within the sale area to the division, (9) the purchasers site-specific operation requirements including, but not limited to, erosion control and protection of water; fire prevention and control; roads; sale area supervision; protection of fish, wildlife and recreational values; sale area access and public safety. A contract must state the date upon which the severance or extraction of material is to be completed. The director at his discretion may grant an extension not to exceed one year. When determined by the director that a delay in completing the contract is due to causes beyond the purchaser's control, the contract will be extended for a time period equal to the delay.

The director, in his discretion, will require a purchaser to provide a performance bond based on the total value of the sale. The performance bond must remain in effect for the duration of the contract unless released in writing by the director.

3. Alaska Department of Environmental Conservation (ADEC)

The Department of Environmental Conservation (ADEC) has statutory responsibility for preventing air, land, and water pollution. Oil and gas activities, such as the disposal of drilling mud and cuttings, the flaring of hydrocarbon gases, and the discharge of wastewater, are regulated by this agency as well as the Oil and Gas Conservation Commission if the activity involves a class II injection well. Several separate written permits are required before activity can begin. Before a solid waste disposal, wastewater or air quality permit is issued, two public notices and an opportunity for public comment (and a public hearing, if requested) are required.

Oil Discharge Prevention and Contingency Plan: Lessees must comply with the requirements of AS 46.04.010-900, Oil and Hazardous Substance Pollution Control. This requirement includes the preparation and approval by ADEC of an Oil Discharge Prevention and Contingency Plan (C-Plan) (AS 46.04.030 and 18 AAC 75.445). Details on the contents of the plan are in Chapter Six.

Prior to receiving a permit to drill, the lessee must demonstrate in the plan of operations the ability to promptly detect, contain, and cleanup any lease-related hydrocarbon spill before the spill impacts fish and wildlife populations or their habitats. This includes the capability to drill a relief well in the event of a loss of well control. ADEC has authority under AS 46.04 over both onshore and offshore activities for the purpose of preventing and cleaning up oil spills.

If transportation by water is planned, AS 46.04.030 requires that the lessee obtain the approval of ADEC for detailed oil spill contingency plans prior to the commencement of each aspect of the operation, including individual wells, drilling pads or platforms, pipelines, storage facilities, loading facilities, and individual tankers or barges.

Wastewater Disposal: Domestic greywater must be disposed of properly at the surface and a Wastewater Disposal Permit is required (18 AAC 72). Typically, waste is processed through an on-site plant and disinfected before discharge. ADEC sets fluid volume limitations and threshold concentrations for biochemical oxygen demand (BOD), suspended solids, pH, oil and grease, fecal coliform and chlorine residual. Monitoring records must be available for inspection and a written report may be required upon completion of operations.

Annular Injection: If fluid is to be injected into a well annulus, a permit is required. ADEC considers the volume, depth and other physical and chemical characteristics of the formation designated to receive the waste. Injection is not permitted into water-bearing zones where dissolved solids or salinity concentrations fall below predetermined threshold limits. Waste not generated from a hydrocarbon reservoir cannot be injected into a reservoir.

Solid Waste Disposal Permit: Recent industry practice has been to utilize methods other than surface reserve pits for disposal of drilling muds, such as injection wells, where possible. In addition, the majority of muds utilized today are water-based. When a well is drilled, muds and cuttings are initially either temporarily stored on a gravel pad or collected in a reserve pit pending final disposal via injection. Drilling muds and cuttings discharged into a reserve pit require pre-approval and a written permit. The permit addresses design, operation and closure concerns to assure that unacceptable environmental effects are avoided.

Solid waste storage, treatment, transportation and disposal are regulated under 18 AAC 60. For all solid waste disposal facilities, a comprehensive disposal plan is required, which must include engineering design criteria and drawings, specifications, calculations and a discussion demonstrating how the various design features (liners, berms, dikes) will assure compliance with regulations.

Before approval, solid waste disposal permit applications are reviewed for compliance with air and water quality standards, wastewater disposal and drinking water standards, as well as for their consistency with the ACMP and Alaska Historic Preservation Act (18 AAC 60.215). The application for a waste disposal permit must include a map or aerial photograph (indicating relevant topographical, geological, hydrological, biological and archeological features), with a cover letter describing type, estimated quantity and source of the waste as well as the type of facility proposed. Roads, drinking water systems and airports within a two mile radius of the site must be identified, along with all residential drinking water wells within a 1/2-mile. There must also be a site plan with cross-sectional drawings that indicate the location of existing and proposed containment structures, material storage areas, monitoring devices, area improvements and on-site equipment. An evaluation of the potential for generating leachate must be presented as well. For above-grade disposal options, baseline water-quality data may be needed to establish the physical and chemical characteristics of the site before installing a containment cell.

Non-drilling related solid waste must be disposed of in an approved municipal solid waste landfill (MSWL). MSWL's are regulated under 18 AAC 60.300-397. All other solid waste (except for hazardous materials) must be disposed of in an approved monofill (18 AAC 60.400-495). A monofill is a landfill or drilling waste disposal facility that receives primarily one type of solid waste and is not an inactive reserve pit (18 AAC 60.990(81)). An inactive reserve pit is a drilling waste disposal area, containment structure, or group of containment structures where drilling waste has been disposed of which the owner or operator does not plan to continue disposing of drilling waste (18 AAC 60.990(61)). Closure of inactive reserve pits is regulated under 18 AAC 60.440.

Drilling waste disposal is specifically regulated under 18 AAC 60.430. Design and monitoring requirements for drilling waste disposal facilities are identified in 18 AAC 60.430(c) and (d), respectively. Under 18 AAC 60.430(c)(1), “the design must take into account the location of the seasonal high groundwater table, surface water, and continuous permafrost, as well as proximity to human population and to public water systems, with the goal of avoiding any adverse effect on these resources.” The facility must be designed to prevent the escape of drilling waste and leachate, prevent contamination of groundwater, and be of sufficient volume and integrity to prevent leakage due to erosion, precipitation, wind and wave action, and changing permafrost conditions. The plans for the proposed design and construction of the drilling waste disposal facility and the fluid management plan must be approved and signed and sealed by a registered engineer (18 AAC 60.430(c)(5)).

Today, North Slope drilling fluids are disposed of by reinjection deep into the ground. In the past, muds and cuttings were disposed of using surface disposal methods (reserve pits). Reserve pits must still be constructed for every well. Before a well may be permitted under 20 AAC 25.005, a proper and appropriate reserve pit must be constructed, or appropriate tankage installed for the reception and confinement of drilling fluids and cuttings, to facilitate the safety of the drilling operation, and to prevent contamination of ground water and damage to the surface environment (20 AAC 25.047).

Typically, a reserve pit is a containment cell, lined with an impermeable barrier compatible with both hydrocarbons and drilling mud. Typical dimensions may be approximately 130-feet wide by 150-feet long by 12-feet deep, although specific configurations vary by site. The cell may receive only drilling and production wastes associated with the exploration, development or production of crude oil, natural gas or hydrocarbon contaminated solids. The disposal of hazardous or other waste in a containment cell is prohibited. After the well is deepened, the residue in the reserve pit is often dewatered and the fluids are injected into the well annulus. An inventory of injection operations, including volume, date, type and source of material injected is maintained by requirement. Following completion of well activities, the material remaining in the pit is permanently encapsulated in the impermeable liner. Fill and organic soil is placed over it and proper drainage is reestablished. Surface impoundment’s within 1,500 feet are sampled on a periodic basis and analyzed. In addition, groundwater monitoring wells are drilled and sampled on a regular basis. If there are uncontained releases during operations, or if water samples indicate an increase in the compounds being monitored, additional observation may be required.

Substances proposed for disposal classified as "hazardous" undergo a more rigorous and thorough permitting and review process by both ADEC (18 AAC 62 and 63) and EPA.

Air Quality Control Permit to Operate: The federal Prevention of Significant Deterioration (PSD) program, which is administered by ADEC, establishes threshold amounts for the release of byproducts into the atmosphere. Oil and gas exploration and production operations with emissions below predetermined threshold amounts must still comply with state regulations designed to control emissions at these lower levels (18 AAC 50). Activities which exceed pre-determined PSD threshold amounts are subject to a more rigorous application and review process. Such activities include the operation of turbines and gas flares.

For oil and gas activities, these requirements translate into the requirement for a permit to flare gas during well testing (a safety measure) or when operating smoke-generating equipment such as diesel-powered generators. Permit conditions will induce additional scrutiny if a black smoke incident exceeds 20 percent opacity for more than 3 minutes in any 1-hour period.

The burning of produced fluids is prohibited unless failures or seasonal constraints preclude storage in tanks, backhauling or reinjection. If liquids are to be incinerated, they must be burned in smokeless flares. The open burning of produced liquids is prohibited except under emergency conditions.

Gas produced as a by-product of oil production is usually reinjected into the producing formation to maintain pressure which supports further production. Flaring is not an approved method of disposal, however, as a safety measure and backup for standard gas handling systems production facilities, which separate gas from oil, are capable of flaring large volumes of gas. Flaring occurs when the oil and gas separation process is interrupted, or when an unplanned event requires an immediate release from pressure increases. Pilot flares are an operational necessity; they are subject to permit requirements as well.

401 Certification: Under 18 AAC 15.120 a person who conducts an operation which results in the disposal of wastewater into the water of the state need not apply for a permit from ADEC if the disposal is permitted under an NPDES permit. When an NPDES permit is issued under Section 401 (33 U.S.C. ß 1341) of the Clean Water Act, ADEC does not require a separate permit, but participates by certifying that the discharge meets state and federal water quality standards.

When an application is made, a duplicate must be filed with the department and public notice of the certification application is published jointly by EPA and ADEC (18 AAC 15.140 and 40 C.F.R. ß 125.32). As a result, the state and federal reviews run concurrently. Public comment is sought and a hearing can be requested.

Following an EPA determination, but within 30-days, the department must provide the applicant, EPA, and all persons who submitted timely comments with a copy of the certification. The decision may impose stipulations and conditions (such as monitoring and/or mixing zone requirements), and any person disagreeing with the decision may request an adjudicatory hearing (18 AAC 15.200-920). Once activity begins, both EPA and the department have the responsibility to monitor the project for compliance with the terms of the permit.

The Corps of Engineers 404 permit program (see Corps of Engineers) also requires certification under section 401 of the Clean Water Act and it is processed in a similar manner. The ADEC certification is termed a Certificate of Reasonable Assurance.

Review Process: Following receipt of an application for a permit to dispose of solid waste disposal, wastewater, or air quality permit, ADEC must publish two consecutive notices in a newspaper of general circulation in the area affected by the proposed operation as well as through other appropriate media.

Comments must be submitted in writing within 30-days after the second publication and a public hearing may be requested. A hearing will be scheduled if good cause exists. Notice of a public hearing is handled in a manner similar to that of the initial application. Permits issued by the department may be subject to review for consistency with the Alaska Coastal Zone Management Program.

A decision on an application includes (1) the permit, (2) a summary of the basis for the decision and (3) provisions for an opportunity for an adjudicatory hearing (18 AAC 15). The decision, as conditioned, is sent to the applicant as well as each person, or entity, who submitted timely comments or testified at a public hearing. Permits may be valid for up to five years. Renewals are treated the same as the original application, but they do not receive public notice.

4. Alaska Department of Fish and Game (ADF&G)

The Alaska Department of Fish and Game analyzes the effect of any activity on fish and wildlife, the users of those resources, and the protection of habitat. ADF&G requires permits for any activity in state game refuges, sanctuaries, critical habitat areas, and streams that contain anadromous fish, as well as other areas the agency believes might be threatened by development. Management plans control activities within many legislatively designated areas. By statute these areas are jointly managed with the Department of Natural Resources. Permits are conditioned to mitigate impacts. For example, timing restrictions are used to limit the impact on transitory wildlife. Public notice of ADF&G permit actions is not required.

Fish Habitat Permit: Title 16 gives ADF&G permitting authority over activities affecting anadromous fish streams that could block fish passage. A fish habitat permit must be obtained from ADF&G prior to using, diverting, obstructing, polluting, or changing the natural flow or bed of anadromous streams (AS 16.05.870). If the proposed activity obstructs fish passage, a fishway and device for the safe passage of downstream migrants may be required under AS 16.05.840.

Additionally under the ACMP, wetlands and tidelands must be managed to assure adequate water flow, avoid adverse effects on natural drainage patterns, and the destruction of important habitat (6 AAC 80.130(c)(3)). Rivers, streams, and lakes must be managed to protect natural vegetation, water quality, important fish or wildlife habitat, and natural water flow (6 AAC 80.130(c)(7)). To further protect fish and wildlife habitat, 6 AAC 80.070(b)(3) requires that facilities be consolidated, to the extent feasible and prudent.

ADF&G Special Area Permit: For activities in a legislatively designated area (such as a game refuge, a game sanctuary or critical habitat area), a Special Areas Permit is required (AS 16.20 and 5 AAC 95). Currently there are no such areas on the North Slope.

5. Alaska Oil and Gas Conservation Commission (AOGCC)

The Alaska Oil and Gas Conservation Commission (AOGCC) administers the Alaska Oil and Gas Conservation Act under Title 31. The AOGCC may investigate to determine whether waste exists or is imminent. It is also responsible for assuring that accurate metering and measuring of oil and gas production takes place.

The commission maintains programs to ensure that the drilling, casing and plugging of a well occurs in a manner that prevents (1) escapement from one stratum into another, (2) the intrusion of water into an oil or gas horizon, (3) the pollution of fresh water supplies, and (3) blowouts, cavings, seepage and fires. For conservation purposes, the commission regulates certain aspects of the drilling, production, and plugging of wells in addition to well spacing, the disposal of salt water and oil field waste and the contamination of underground water.

Reports, well logs, drilling logs and other information must be filed with the commission for each well drilled. The information is confidential for two years. However, if the data is considered especially important for the evaluation of nearby unleased land, it may be held confidential for an extended period.

Permit to Drill: Before drilling, a Permit to Drill, valid for 24-months, must be obtained from the commission (AS 31.05 and 20 AAC 25). The permit application informs the commission of a proposed operator's engineering and safety plans designed to ensure the structural and mechanical ability of the well to contain fluids and gases that could be encountered at various depths and under varying pressure.

With the application, a diagram of the proposed blow-out prevention (BOP) equipment (used for secondary well control) must be included with an analysis of expected down-hole pressures. A BOP, along with related well-control equipment, must be installed, used, maintained and tested as necessary to assure control over the well and conform to the latest technology and accepted industry practice.

Casing, cementing, and drilling fluid programs are also designed to assure primary well control. A drilling fluid monitoring program must be in place to detect gases entrained in the drilling fluid and detect Hydrogen Sulfide, a poisonous gas.

For exploration wells, a well-site survey is conducted using seismic techniques. The data from the seismic survey are analyzed to detect shallow gas in near-surface strata to a depth of 2,000 feet and the depths of suspected overpressured strata are predicted. For offshore wells, an analysis of seafloor conditions is required.

If climatic conditions and operational or environmental concerns become apparent, or if unplanned-for circumstances prevent the continuation of an approved program, an operator can secure a well and apply for an operational shut down. When a well is abandoned, plans for setting plugs, mudding, cementing, shooting, testing and removing the casing must be submitted to the commission for approval. Abandoned or suspended wells may remain that way for long periods of time and until final plans are made, the commission seeks to prevent the movement of fluids into or between freshwater and/or hydrocarbon sources.

Before beginning to drill, an operator must post a bond for $100,000 in favor of the state for a single well, or $200,000 for a blanket bond covering more than one well. The purpose of the bond is to insure that a well is properly completed or abandoned.

After abandonment, a location clearance is required. For onshore locations, materials, supplies, structures, and installations must be removed, debris properly disposed of and the reserve pit filled and graded. The location must be left uncontaminated, in a clean condition acceptable to state inspectors. Off-shore locations must have all casing, wellhead equipment, pilings, and other structures removed to a depth of 15 feet below the mud line.

Disposal of Wastes: AOGCC must also review and approve proposals for the underground disposal of water and oil field waste (20 AAC 25.252). Before receiving an approval, an operator must demonstrate to the commission that the movement of fluids into freshwater sources will not occur. Disposal must be into a well with equipment designed to assure a controlled release. A plat is required showing the location of other wells within a quarter-mile that penetrate the same disposal zone, and surface owners (located within one quarter-mile) must be provided with a copy of the application.

Included with a description of the fluid to be injected (with its composition, source, daily amount and disposal pressures), the application must contain the name, description, depth, thickness, lithologic description and geological data of the disposal formation and adjacent confining zones. There must be evidence presented that the disposal well will not initiate or propagate fractures through the confining zones that would allow fluids to migrate: a laboratory analysis is required. Under certain circumstances, however, a fresh water aquifer exemption may be granted (20 AAC 25.440).

Following approval, liquid waste from drilling operations may be pumped into a well drill pipe, casing or annulus. The pumping of drilling mud from reserve pits (not runoff) into exploration or stratigraphic test wells or into the annuli of a well approved in accordance with 20 AAC 25.080 is an operation incidental to drilling of the well, and is not a disposal operation subject to regulation as a Class II well under EPA regulations.

Review Process: Actions by the commission that have statewide application (such as adopting regulations) are conducted in accordance with the Administrative Procedures Act. Major actions, resulting in conservation orders that apply to a single well or field, receive public notice by publication in a newspaper (20 AAC 25.540). In addition, a mailing list is maintained for the purpose of sending notices, orders or publications to those who request them. There are different lists for different purposes.

6. U.S. Environmental Protection Agency (EPA)

NPDES Permit: The federal Clean Water Act requires a National Pollution Discharge Elimination System Permit (NPDES) to release pollutants into the waters and wetlands of Alaska. The permitting system is designed to ensure that discharges do not violate state and federal water quality standards by identifying control technologies, setting effluent limitations, and gathering information through reporting and inspection.

Typically, approved discharges are covered by a general permit developed through a public review process after the specific location of a proposed discharge has been identified by the EPA in an Authorization to Discharge. When a general permit for a specific geographical area does not exist, proposed discharges are subject to an individual approval process and NPDES permit.

When issued, a NPDES permit covers the discharge of drilling muds, cuttings and wash water, as well as deck drainage, sanitary and domestic wastes, desalination unit waste, blow-out preventer fluids, boiler blowdown, fire control system test water, non-contact cooling water, uncontaminated ballast and bilge waters, excess cement slurry, waterflooding discharges, produced waters, well treatment fluids and produced solids.

Review Process: Discharges needing authorization before a general permit is issued require individual permits (40 C.F.R. ß 122). Once EPA receives an application for a proposed discharge, a draft permit and fact sheet is prepared to address the proposal. Public notice solicits comments and provides notification of state certification under section 401 of the Clean Water Act. It also initiates a review for consistency with the ACMP.

There is a minimum period of 30-days for public comment and all comments received must be in writing. Public hearings, if scheduled in the original notice, will be canceled if there is no interest in holding them; however, anyone can request a hearing.

If issued, an individual permit will not take effect for 30-days, during which time an aggrieved party who earlier submitted written comments may request an evidentiary hearing. EPA will respond by issuing a finding identifying the qualifying issues to be decided before an adjudicatory law judge. For general permits, notice must be published in the Federal Register and issuance may be challenged for 120-days (40 C.F.R. ß 124).

A permit will not be issued unless ADEC certifies that the discharge will comply with the applicable provisions of the Clean Water Act. The certification process is addressed in an agreement between EPA and ADEC. In addition, the proposed activity must be consistent with the requirements of the Alaska Coastal Management Plan.

Persons wishing to comment on a state consistency determination or 401 certification must submit written comments within the 30-day comment period.

Typical Permit Requirements: Only pre-approved discharges may be released and each must be emitted in accordance with an effluent limitation designed for that particular emission at that point of discharge. After it is issued, the permit will be modified or revoked if new information justifies different conditions, or if new standards are promulgated that are more stringent than those in the original approval. For example, existing permits prohibit discharges within 1,000 meters of coastal marshes, river mouths, game refuges, sanctuaries, and critical habitat; and specially designed monitoring programs are required within 1,500 meters of areas considered sensitive.

In all cases, mixing zones are established at the discharge point and produced waters are passed through at least one oil separator before discharge. Under certain conditions verification studies may be required of the mixing zone; discharge limitations are then applied as the emission passes through the mixing zone.

Only pre-approved drilling muds, specialty additives and mineral oil pills may be discharged; and maximum concentrations are specified. For each mud system, a precise chemical inventory of its constituents is maintained. Free oil or oil-based muds (those containing oil as the continuous phase, with water as the dispersed phase) may not be discharged at any time. The oil content of a discharge must be analyzed (1) at the time the fluid or additive is used, (2) when a drilling fluid could become contaminated with hydrocarbons from an underground formation, and (3) immediately when the static sheen test of a discharge indicates violation. Water-based drilling fluids that have contained diesel oil or cuttings associated with muds that contain diesel oil may not be discharged. In state waters, the discharge of cuttings with an oil volume greater than 5 percent by weight, or the discharge of free oil as a result of discharging drilling muds or cuttings is prohibited as well. A static sheen test is performed daily on emission samples as well as prior to any bulk discharge. Generally, the discharge of floating solids or visible foam is not allowed. Surfactant, dispersant and detergent discharges are minimized, but may be allowed to comply with occupational health and safety requirements. In all cases, deck drainage and wash water must go through an oil/water separator; the effluent is tested and any discharge that would cause a sheen on the receiving waters is prohibited.

SPCC Plans: Owners or operators of non-transportation-related onshore and offshore facilities engaged in drilling, producing, gathering, storing, processing, refining, transferring, distributing or consuming oil and oil products must prepare a spill prevention control and countermeasures plan in accordance with 40 C.F.R. 112. Drilling rigs are included in this facility definition. The purpose of the SPCC plan is to prevent discharges of oil into navigable waters of the U.S. and the adjoining shorelines. The plan must address three areas:

1. operating procedures installed by the facility to prevent oil spills;
2. control measures installed to prevent a spill from entering navigable waters; and
3. countermeasures to contain, cleanup and mitigate the effects of an oil spill that impacts navigable waters.

The SPCC plan is facility-specific and is part of the required documentation that must be present at the facility. The owner or operator must have the plan certified by a registered engineer but does not submit it to EPA for approval prior to the beginning of operations. The plan must be available for inspection at the facility. If the facility discharges more than 1,000 gallons or harmful quantities of oil in one event or experiences more than two discharges in a twelve-month period, the operator must submit the SPCC plan to the EPA and the ADEC for review. The SPCC plan differs from the facility response plans (FRP) required by OPA 90 in that the SPCC plan focuses on prevention and the FRP focuses on response.

7. U.S. Army Corps of Engineers

The Department of the Army regulatory program is administered by the U.S. Army Corps of Engineers (Corps). The program is authorized by section 10 of the Rivers and Harbors Act of 1899, section 404 of the Clean Water Act, and section 103 of the Marine Protection, Research and Sanctuaries Act. The permit program authorizes activities in, on, or affecting, navigable waters as well as the discharge of dredge or fill into waters of the United States.

For purposes of administration, waters of the United States includes wetlands. The most common oil and gas activity requiring a Corps permit is the discharge or placement of fill, generally gravel or ice, on "wetlands."

The Environmental Protection Agency and the Corps jointly administer the 404 program. The Corps performs the day-to-day permitting and enforcement functions (including individual permit decisions) and jurisdictional determinations, while EPA develops and interprets environmental criteria to be used in the evaluation of permit applications. The 404(b)(1) guidelines are EPA regulations; as a result, they can (and have) exercise veto authority over permit decisions made by the Corps.

Section 10 of Rivers and Harbors Act of 1899 (33 U.S.C. ß 403): If work is anticipated to be performed on or in (or affect) navigable waters, a permit from the Corps is required. A section 10 permit addresses activities that could obstruct navigation. Oil and gas activities requiring this type of permit would be exploration drilling from a backup drill rig, installation of a production platform, or construction of a causeway. The process and concerns are similar to those required for section 404 approval and, at times, both may be required.

Individual Permits, General Permits and Letters of Permission: Some oil and gas activities undergo individual project reviews. Under this process, projects are evaluated on a case-by-case basis and a public interest determination (33 C.F.R. ß 320) is conducted. The Corps issues general permits that carry a standard set of stipulations that cover frequent, repetitive and similar activities when, individually and cumulatively, there will be a minimal environmental effect. A general permit describes the activity covered and includes appropriate proposed stipulations and mitigation measures. This type of permit generally has a geographical limitation. There are 36 nationwide general permits while the Alaska District has 21.

Letters of Permission (LOP): LOPs are a type of permit that, once approved for issuance after a public review process, undergo individual, but abbreviated reviews. These activities are routine and have been determined to have no significant environmental effect. In Alaska, LOPs are used only for activities that might have an affect on navigable waters under section 10.

Review Process: Upon receipt of an application, the Corps solicits comments from the public, federal, state and local agencies as well as other interested parties. They seek comments to assess the impact of the proposed activity on aquatic resources, endangered species, historic properties, water quality, environmental effects and other public interest factors. Most public comment periods last 30-days and a public hearing can be requested.

The U.S. Fish and Wildlife Service, National Marine Fisheries Service and the Alaska Department of Fish and Game submit comments to the Corps in accordance with the Fish and Wildlife Coordination Act. Their comments address compliance with section 404(b)(1) of the Clean Water Act as well as the measures they consider necessary for the protection of wildlife resources. Endangered species that frequent the area are identified and the effect the proposed activity might have on them or their habitat is considered (Endangered Species Act 1973, 87 Statute 844). In some cases, an environmental assessment or environmental impact statement may be required by the National Environmental Policy Act.

An application to the Corps serves as an application to ADEC for state water quality certification as required under section 401 of the Clean Water Act of 1977 (PL 95-217), and must be reviewed by EPA. The application is reviewed against the Act, the Alaska Water Quality Standards and other applicable state laws. For placing fill in wetlands, water quality stipulations included in the 401 Certification become part of the Corps permit (see ADEC 401 Certification).

The Corps will not issue a permit until consistency requirements for the Coastal Zone Management Act are met and a Coastal Zone Consistency Questionnaire is included with a Corps application. An applicant must certify consistency with the ACMP, and the state Division of Governmental Coordination must, based on the results of the ACMP review, concur. In addition, a review of cultural resources is coordinated with the state's Historic Preservation Office and the federal Minerals Management Service. Archeological or historical data that could be lost or destroyed by the proposed activity is considered and presented in the Corp's final assessment of the described project.

The public interest review (33 C.F.R. ß 320.4) considers guidelines set forth under section 404(b) of the Clean Waters Act. The guidelines outline a mitigation sequence that must be followed in the decision-making process, which applies, to all waters, including wetlands. A permit will be denied if the contemplated discharge does not meet the required standards. For placement of fill, the mitigation sequence requires avoiding wetlands where practical, minimizing impact where avoidance is not practicable, and compensating for impact to the extent appropriate and practicable.

A decision to issue a permit, with proposed mitigation measures included, is based upon an evaluation of the probable impacts (including cumulative impacts) of a proposed activity. Benefits that can reasonably be expected to accrue are balanced against reasonably foreseeable costs. Factors relevant to the decision are conservation, economics, aesthetics, general environmental concerns, wetlands, fish and wildlife values, flood hazards, floodplain values, land use, navigation, shore erosion and accretion, recreation, water supply and conservation, water quality, energy needs, safety, food and fiber production, mineral needs, property ownership, and in general, the needs and welfare of the people.

8. North Slope Borough

The NSB has adopted a comprehensive plan and land management regulations under Title 29 of the Alaska Statutes (AS 29.40.020-040). These regulations are Title 19 of the NSB Municipal Code and require borough approval for certain activities necessary for exploration and development of lease contracts. The Borough can assert its land management powers to the fullest extent permissible under law to address any outstanding concerns regarding impacts to the area's fish and wildlife species, and habitat and subsistence activities.

The NSBCMP has been incorporated into the ACMP. The program presents policies to regulate activities in the borough's coastal zone. Consistency with the ACMP standards and the policies of the NSBCMP is discussed in Alaska Coastal Management Consistency Analysis Regarding Proposed Oil and Gas Lease Sale 87, North Slope Areawide, dated August 20, 1997.

9. Other Requirements

Lessees must comply with applicable federal law concerning Native allotments. Activities proposed in a plan of operations must not unreasonably diminish the use and enjoyment of lands within a Native allotment. Before entering onto lands subject to a pending or approved Native allotment, lessees must contact BIA and BLM and obtain approval to enter.

The U.S. Coast Guard has authority to regulate offshore oil pollution under 33 C.F.R. ßß 153-157.

Upon expiration or termination of the lease, paragraph 21 of the lease contract requires the lessee to rehabilitate the lease area to the satisfaction of the state and ASRC. The lessee is granted one year from the date of expiration or termination to remove all equipment from the lease area and deliver up the lease area in good condition.

In addition to existing laws and regulations applicable to oil and gas activities, DO&G requires, under paragraph 26 of the state's standard lease contract, that Sale 87 leases be subject to all applicable state and federal statutes and regulations in effect on the effective date of the lease. Sale 87 leases will also be subject to all future laws and regulations placed in effect after the effective date of the leases to the full extent constitutionally permissible.